

AMENDMENTS TO THE CLAIMS:

Please amend Claims 1 and 5 as follows.

1. (Currently Amended) A method of monitoring ~~the~~ a level of optical power in an optical waveguide comprising the steps of:

enclosing a length of the optical waveguide within an insulated cavity;

measuring the temperature T_1 within the cavity;

measuring the temperature T_2 outside the cavity; and

determining the level of optical power in the waveguide based on the temperature difference $T_1 - T_2$.

2. (Original) The method of claim 1 wherein the temperature T_1 is measured over the length of waveguide.

3. (Original) The method of claim 1 wherein the temperature T_2 is measured over the length of the waveguide.

4. (Original) The method of claim 1 wherein the optical waveguide comprises an optical fiber and the walls of the cavity comprise a groove within a substrate and a lid.

5. (Currently Amended) Apparatus for monitoring ~~the~~ a level of optical power in an optical waveguide comprising:

a substrate and lid forming therebetween an elongated insulated cavity for containing the optical waveguide, the cavity having a cross sectional area less than twice that of the waveguide;

a first temperature sensor for measuring the temperature along the waveguide within the cavity; and

a second temperature sensor for measuring the temperature along the waveguide outside the cavity.

6. (Original) The apparatus of claim 5 wherein the waveguide comprises an optical fiber and the cavity comprises a groove in the substrate.

7. (Original) The apparatus of claim 5 wherein the substrate comprises monocrystalline silicon.